

AMENDMENTS TO THE SPECIFICATION

I. Please replace the paragraph on page 5, lines 10 - 19, with the following amended paragraph:

The block diagram of an embodiment according to the present invention is shown in FIG. [[1]] 3, in which an infrared receiver 10 or ultrasonic transducer 22 accepts a transmitted signal from outside and outputs a modulated or carrier signal. The output from the infrared receiver 10 or ultrasonic transducer 22 is fed to an amplifier circuit 24, and the amplified signal thus produced by the amplifier circuit 24 is further fed to a digital filter 26 to filter out the carrier component thereof, and therefore the original or unmodulated signal is recovered. When no transmitted signals outside are present, the output of the amplifier circuit 24 remains at a silent voltage.

II. Please replace the paragraph beginning on page 6, line 15, and ending on page 7, line 7, with the following amended paragraph:

FIG. 5 shows the block diagram of a digital filter, in which the digital filter 26 is fed with the amplified output signal that is amplified by the amplifier 28 with the output signal from the infrared receiver 10 or ultrasonic transducer 22. When the amplified output signal is inputted to the digital filter 26, the output of the fixed-interval reset circuit 38 within the digital filter 26 is set ON. The clock 44 is connected to a ~~for the~~ fixed-interval reset circuit 38 and is connected to a ~~fixed-interval~~ sample circuit 40 ~~is connected to the fixed interval reset circuit 38 and through an inverter 42 to the fixed interval sample circuit 40.~~ The fixed-interval reset circuit 38 resets its output to OFF every interval t . ~~When~~ In the detection of an infrared or ultrasonic signal, by setting is ~~detected and under the circumstances of~~ the reset period t of the fixed-interval reset circuit 38 ~~is to be~~ greater than the period of the carrier signal for the infrared or ultrasonic transmission, the unmodulated or original data signal will be ~~fetched and outputted~~ output by the fixed-interval sample circuit 40 and the influence of the duty cycle is avoided. ~~Finally the fixed interval sample circuit 40 outputs the waveform~~ Thus, the unmodulated or original signal is recovered and demodulation is achieved.